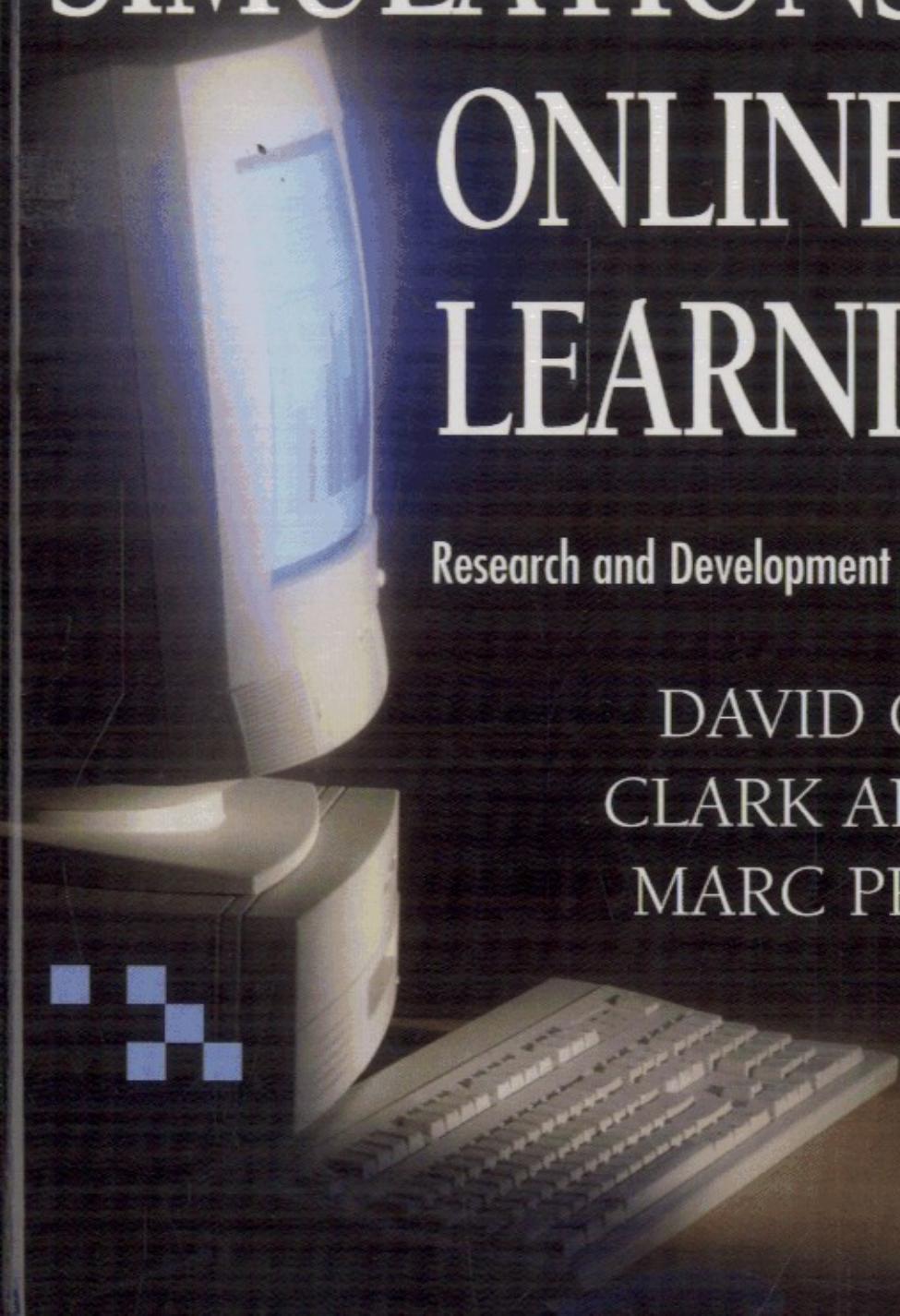


GAMES AND SIMULATIONS IN ONLINE LEARNING

Research and Development Frameworks

DAVID GIBSON
CLARK ALDRICH
MARC PRENSKY



Games and Simulations in Online Learning: Research and Development Frameworks

Table of Contents

Foreword.....	vi
Preface.....	viii

Section I: Situating Games and Simulations in Education

Chapter I

Games and Simulations: A New Approach in Education?	1
<i>Göknur Kaplan Akilli, Pennsylvania State University, USA</i>	

Chapter II

Pedagogy in Commercial Video Games	21
<i>Katrin Becker, University of Calgary, Canada</i>	

Section II: Social Analyses of Games and Simulations

Chapter III

Learning Sociology in a Massively Multistudent Online Learning Environment.....	49
<i>Joel Foreman, George Mason University, USA</i>	
<i>Thomasina Borkman, George Mason University, USA</i>	

Chapter IV	
Online Games for 21st Century Skills.....	59
<i>Lisa Galarneau, University of Waikato, New Zealand</i>	
<i>Melanie Zibit, Boston College, USA</i>	
Chapter V	
Rethinking Cognition, Representations, and Processes in 3D Online Social Learning Environments.....	89
<i>James G. Jones, University of North Texas, USA</i>	
<i>Stephen C. Bronack, Appalachian State University, USA</i>	
Chapter VI	
E-Simulations in the Wild: Interdisciplinary Research, Design, and Implementation	115
<i>Karen Barton, University of Strathclyde, UK</i>	
<i>Paul Maharg, University of Strathclyde, UK</i>	
 Section III: What Teachers Should Know and Be Able To Do	
Chapter VII	
Perspectives from Multiplayer Video Gamers	150
<i>Jonathan B. Beedle, University of Southern Mississippi, USA</i>	
<i>Vivian H. Wright, University of Alabama, USA</i>	
Chapter VIII	
Gamer Teachers.....	175
<i>David Gibson, CurveShift.com, USA</i>	
<i>William Halverson, SimSchool, USA</i>	
<i>Eric Riedel, Walden University, USA</i>	
Chapter IX	
Developing an Online Classroom Simulation to Support a Pre-Service Teacher Education Program	189
<i>Brian Ferry, University of Wollongong, Australia</i>	
<i>Lisa Kervin, University of Wollongong, Australia</i>	
Chapter X	
Lessons Learned Modeling “Connecting Teaching and Learning”	206
<i>Gerald R. Girod, Western Oregon University, USA</i>	
<i>Mark Girod, Western Oregon University, USA</i>	
<i>Jeff Denton, Western Oregon University, USA</i>	
Chapter XI	
Educational Theory Into Practice Software (ETIPS).....	223
<i>Sara Dexter, University of Virginia, USA</i>	

Section IV: Using Real Space in Digital Games and Simulations

Chapter XII

Pervasive Game Design as an Architectural Teaching and Research Method 236

*Steffen P. Walz, Swiss Federal Institute of Technology (ETH) Zurich, Switzerland
Odilo Schoch, Swiss Federal Institute of Technology, (ETH) Zurich, Switzerland*

Chapter XIII

Reliving History with “Reliving the Revolution”: Designing Augmented Reality Games to Teach the Critical Thinking of History 250

Karen Schrier, MIT, USA

Section V: Embedding Assessment in Games and Simulations

Chapter XIV

Building Artificially Intelligent Learning Games..... 271

Richard Van Eck, University of North Dakota, USA

Chapter XV

simSchool and the Conceptual Assessment Framework 308

David Gibson, CurveShift.com, USA

Chapter XVI

Designing Online Games Assessment as “Information Trails” 323

Christian Sebastian Loh, Southern Illinois University Carbondale, USA

Chapter XVII

Machine Learning Assessment Systems for Modeling Patterns of

Student Learning 349

Ron Stevens, UCLA IMMEX Project, USA

Chapter XVIII

Shaping the Research Agenda with Cyber Research Assistants 366

Lyn Henderson, James Cook University, Australia

About the Authors..... 386

Index 394